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ALBERTA POPULATION GROWTH

SECOND QUARTER, 1990



TREASURY
Bureau of Statistics

ALBERTA POPULATION GROWTH
SECOND QUARTER, 1990

January, 1991

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PREFACE

This publication presents up-to-date information on quarterly population estimates and population growth components (births, deaths and migration) for the Province of Alberta. These statistics, jointly prepared with the Demography Division of Statistics Canada, are derived using several government administrative data files.

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INTRODUCTION

This publication presents the population estimates and growth components (births, deaths and migration) for Alberta for the second quarter of 1990. Also included are historical data by quarter since 1986, statistics on quarterly flows between Alberta and other provinces (1989-90), and population growth components by census year (1981-90). As a regular feature for all second quarter reports, population by five-year age group and sex for June 1 (1989-90) are provided.

Three charts are presented to illustrate trends in (1) major population growth components, (2) gross flow of interprovincial migration, and (3) population exchange between Alberta and other provinces. A brief description of the methodology and information sources employed in deriving these estimates is contained in the appendix.

In the following sections, the demographic trends including the age structure of Alberta population are analyzed.

SUMMARY REVIEW OF DATA

Alberta experienced its largest second quarter population growth (13,310) since 1982, due mainly to both interprovincial and international migration. For the former, the improving net exchange with most other provinces (and, in particular, the reduced net outflow to B.C.) has resulted in a second consecutive quarter of positive interprovincial migration - the first time this has happened in four years.

Reflecting both a higher number of immigrants admitted to Canada and an increased number of these people choosing Alberta, the gain from net international exchange almost doubled in the second quarter to reach its highest quarterly level in ten years.

These shifts contributed to a twelve month population increase of 45,600, the largest since 1982. As of July 1, 1990, Alberta's population had reached 2.47 million.

Like Canada as a whole, Alberta's population continues to become older. Low birth and death rates and the aging of the baby-boom generation have increased the median age from 26.7 in 1980 to 30.9 in 1990. The percentage distribution of Albertans aged 65 and over has grown in the same period from 7.4 to 8.9.

QUARTERLY GROWTH STATISTICS

- Compared to a growth of 9,900 for the second quarter of 1989, Alberta's population increased 13,310 in the second quarter this year, the highest second quarter growth since 1982. This was attributable to an improvement in migration from both interprovincial and international sources (Tables 1 & 2).
- Due to a decrease in net outflow to British Columbia and a shift to net inflow from Ontario, net interprovincial migration changed from a loss (870) in the second quarter last year to a gain (1,080) this year, the highest second quarter gain since 1982.
- The interprovincial flows during the second quarter were 14,310 into and 13,230 out of Alberta (Table 3 and Figure 3). British Columbia contributed 32% of Alberta's in-migrants and received 45% of out-migrants. Ontario and Saskatchewan continue to be both the next largest destinations for Albertans and the major sources of Alberta in-migrants.
- Net international migration almost doubled from 2,370 in the second quarter of 1989 to 4,270 this second quarter, the highest quarterly level for the past ten years. An increase

in the number of immigrants admitted into Canada as well as more immigrants choosing Alberta were the major reasons.

- Natural increase added 7,960 persons (11,280 births less 3,320 deaths) to the population during the second quarter, slightly lower than the previous second quarter (Table 4).

ANNUAL GROWTH STATISTICS (Year ending June 30, 1990)

- For the past twelve month period, the total population of Alberta increased by 45,600 (1.9%), the highest twelve-month growth since 1982. The Alberta population reached a level of 2,472,500 on July 1, 1990.
- The higher growth was due to a shift from negative to positive interprovincial migration as well as an improvement in the international migration. Compared to a loss of 2,300 for the same period a year ago, net interprovincial exchange gained 3,800 for the past twelve months, the largest yearly gain since 1982. The gain was due to an improvement in migration flows between Alberta and Ontario and between Alberta and British Columbia.
- For the year ending June 30, 1990, the province's net international migration was 12,500, the highest level since 1982. For the previous twelve month period, the figure was 8,100. The improvement was due to a higher number of immigrants admitted into Canada and a higher proportion of these people choosing Alberta in the current year.
- Natural increase dropped marginally to 29,400 from 29,800 a year ago (Table 4). While the total number of deaths increased by 600, the total number of births increased by only 200 as the low fertility rate continued.

AGE STRUCTURE OF ALBERTA POPULATION (JUNE 1, 1989 AND 1990)

- The long term aging trend of Alberta became visible after mid-1960 when birth rates declined while life expectancy improved at the older ages. The changing age structure of Alberta continued during the past year. The aging of the baby boom generation also has been a factor.
- The overall aging of the Alberta population is reflected by the shift in the median age from 1968 onwards. The median age increased from 24.4 in 1968 to 24.7 in 1970, and to 26.7 in 1980. By 1990, it reached 30.9. While an average annual change of 0.2 occurred in the first half of the twenty-two year period, a change of 0.4 was normal for the second.
- The shift in the Alberta age structure is further revealed by an increase in the proportion of elderly population. During the past year, the 65-and-over age group changed from 8.8% to 8.9%, up from 7.4% in 1980. In terms of absolute numbers, the province's elderly population increased by 7,600 during the past year to a total of 220,600 (Table 6).
- The percentage share of young children (0-4) in Alberta remained unchanged at 8.5% during the two years, although the number increased slightly (4,100) as many baby boomers are still in their prime childbearing years.
- The percentage distribution of the working age group (15-64) changed marginally to 67.5% from 67.6%. While the labour market entrants group (aged 15-24) decreased from 15.5% to 15.2%, the older working-age group (aged 25-64) expanded slightly from 52.1% to 52.3%.
- The changing age composition is also reflected by the child and elderly dependency ratios. These ratios are defined as

the proportion of population 0-14 and 65+ to the population aged 15-64. While the child dependency ratio showed a marginal increase from 34.9% in June 1989 to 35% in June 1990, the old age dependency ratio rose from 13% to 13.2%.

FIGURE 1
POPULATION GROWTH WITH MAJOR COMPONENTS
ALBERTA, 1981-1990

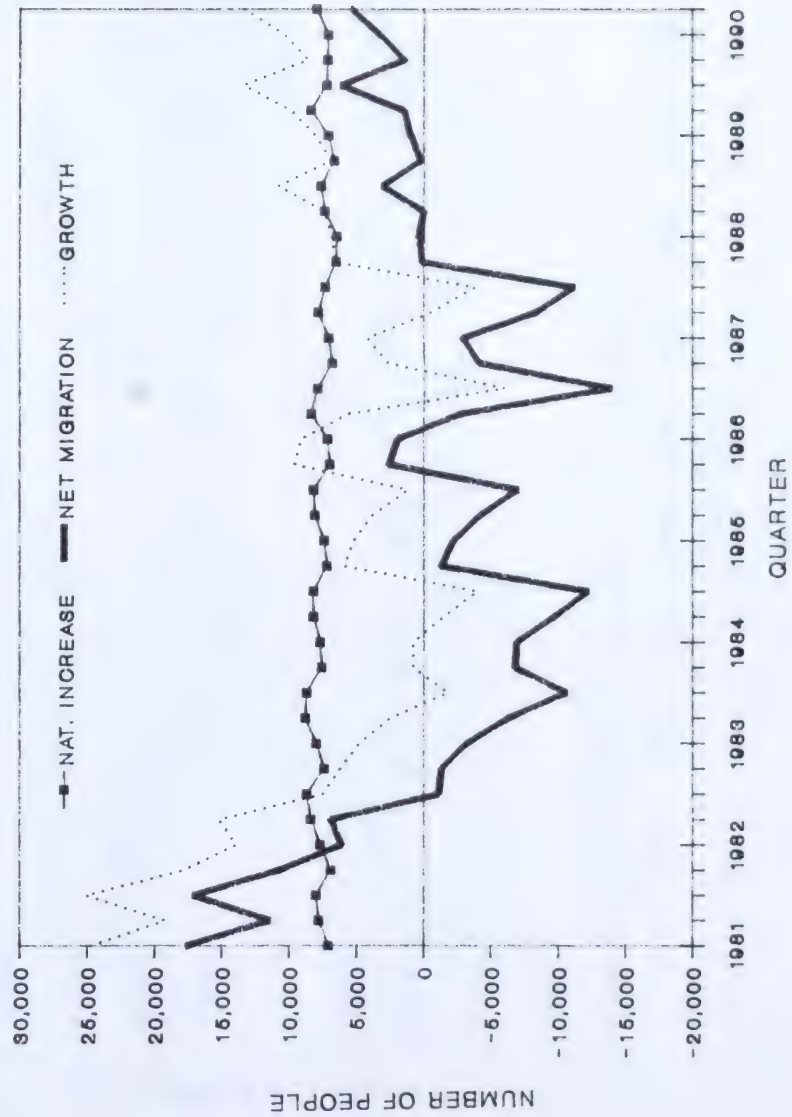


FIGURE 2
INTERPROVINCIAL MIGRATION WITH MAJOR COMPONENTS
ALBERTA, 1981-1990

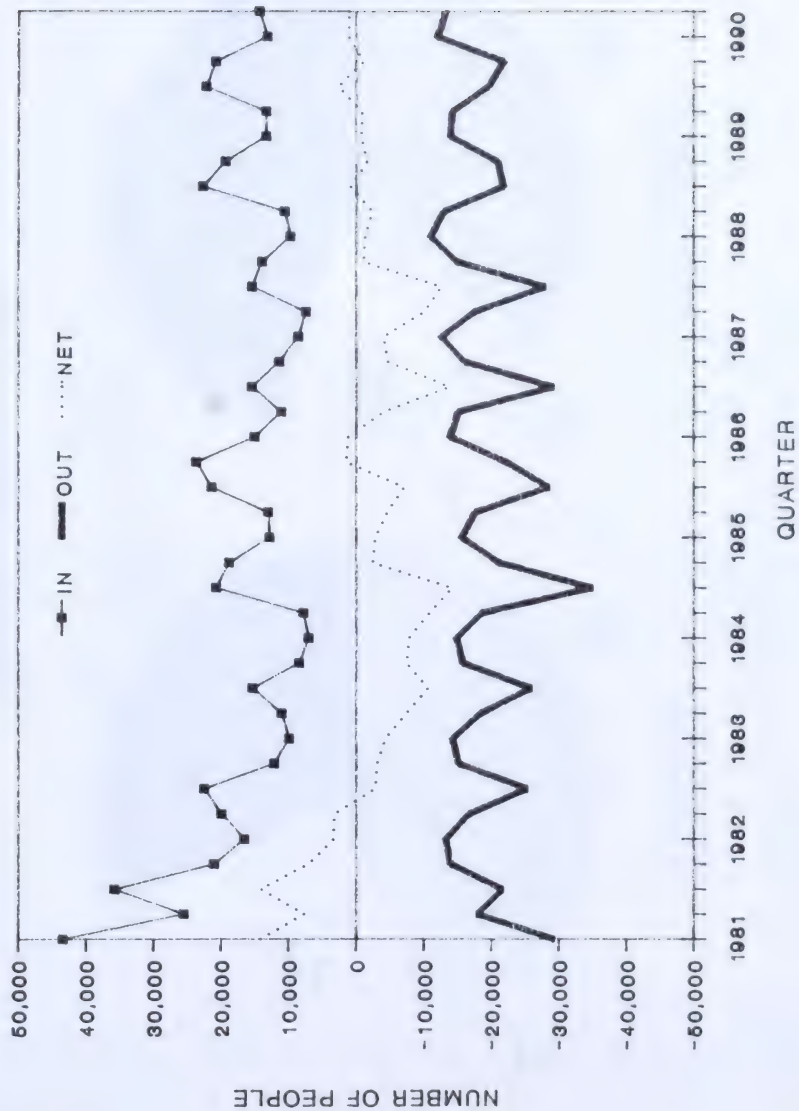


FIGURE 3
POPULATION EXCHANGE, ALBERTA AND OTHER PROVINCES
SECOND QUARTER, 1990

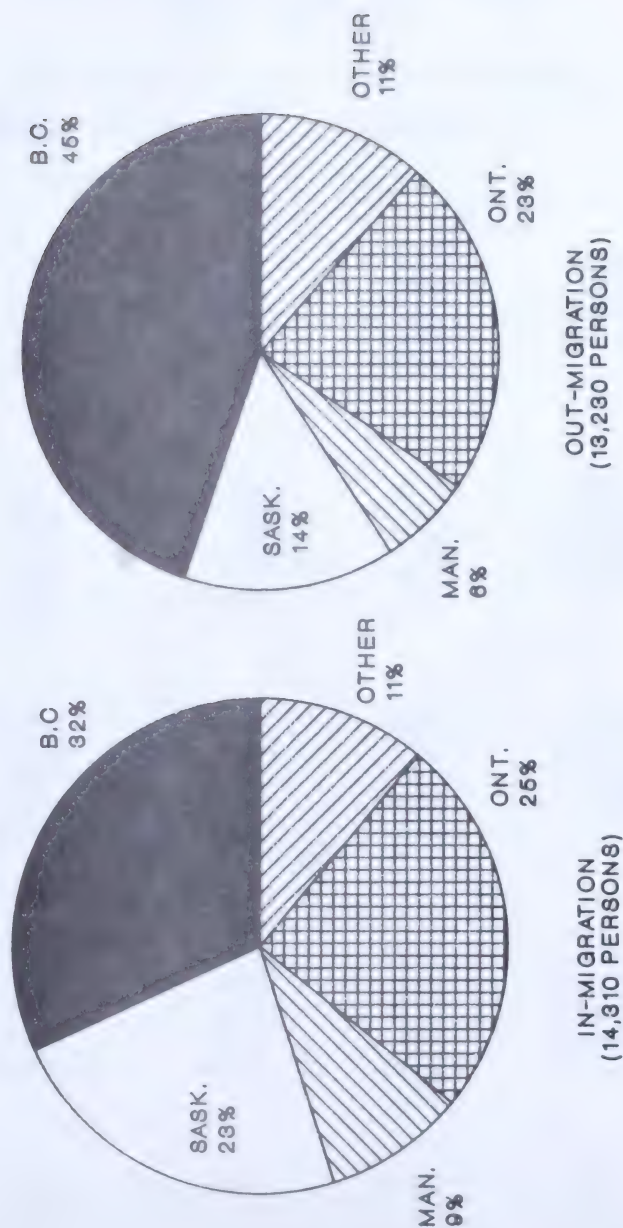


TABLE 1
POPULATION GROWTH BY MAJOR COMPONENT
ALBERTA, 1986 to 1990

Quarter	Natural Increase	Net Migration	Growth	Population
<u>1986</u>				
I	7,170	1,950	9,120	2,368,200 (Apr 1, 86)
II	8,380	-2,780	5,600	2,373,800 (Jul 1, 86)
III	7,880	-13,940	-6,060	2,367,800 (Oct 1, 86)
IV	6,810	-4,140	2,670	2,370,500 (Jan 1, 87)
TOTAL	30,240	-18,900	11,340	
<u>1987</u>				
I	7,100	-2,890	4,210	2,374,700 (Apr 1, 87)
II	7,840	-8,340	-500	2,374,200 (Jul 1, 87)
III	7,340	-11,170	-3,830	2,370,300 (Oct 1, 87)
IV	6,520	110	6,630	2,377,000 (Jan 1, 88)
TOTAL	28,790	-22,290	6,500	
<u>1988</u>				
I	6,470	370	6,840	2,383,800 (Apr 1, 88)
II	7,370	20	7,390	2,391,200 (Jul 1, 88)
III	7,650	3,190	10,840	2,402,000 (Oct 1, 88)
IV	6,660	210	6,870	2,408,900 (Jan 1, 89)
TOTAL	28,160	3,790	31,950	
<u>1989</u>				
I	7,100	970	8,070	2,417,000 (Apr 1, 89)
II	8,400	1,500	9,900	2,426,900 (Jul 1, 89)
III	7,220	6,180	13,400	2,440,300 (Oct 1, 89)
IV	7,150	1,420	8,570	2,448,900 (Jan 1, 90)
TOTAL	29,870	10,070	39,940	
<u>1990</u>				
I	7,110	3,260	10,370	2,459,200 (Apr 1, 90)
Iip	7,960	5,350	13,310	2,472,500 (Jul 1, 90)

Notes: Total population is rounded to the nearest 100.
Data may not add to totals due to rounding.

p: Preliminary

TABLE 2
MIGRATION BY COMPONENT
ALBERTA, 1986 to 1990

Quarter	International			Interprovincial		
	Immigration	Emigration	Net	In Migration	Out Migration	Net
<u>1986</u>						
I	2,200	1,440	760	15,040	13,850	1,190
II	2,540	1,360	1,180	11,090	15,050	-3,960
III	2,530	2,720	-190	15,450	29,190	-13,740
IV	2,310	1,750	560	11,410	16,110	-4,700
TOTAL	9,580	7,270	2,310	52,990	74,200	-21,210
<u>1987</u>						
I	2,600	1,520	1,080	8,570	12,540	-3,970
II	3,190	1,500	1,690	7,440	17,470	-10,030
III	3,530	2,140	1,390	15,390	27,950	-12,560
IV	2,650	1,510	1,140	13,900	14,930	-1,030
TOTAL	11,970	6,670	5,300	45,300	72,890	-27,590
<u>1988</u>						
I	2,860	1,210	1,650	9,690	10,970	-1,280
II	3,650	1,260	2,390	10,590	12,960	-2,370
III	4,220	1,930	2,290	22,700	21,800	900
IV	3,300	1,490	1,810	19,320	20,930	-1,610
TOTAL	14,030	5,880	8,150	62,300	66,660	-4,360
<u>1989</u>						
I	2,870	1,220	1,650	13,290	13,970	-680
II	3,650	1,280	2,370	13,310	14,180	-870
III	5,520	1,990	3,530	22,190	19,540	2,650
IV	4,010	1,500	2,510	20,760	21,850	-1,090
TOTAL	16,050	5,990	10,060	69,550	69,540	10
<u>1990</u>						
I	3,370	1,220	2,150	13,140	12,030	1,110
Ilp	5,560	1,290	4,270	14,310	13,230	1,080

Note: Data may not add to totals due to rounding.
p: Preliminary

TABLE 3

POPULATION EXCHANGE WITH OTHER PROVINCES
ALBERTA, 1989 to 1990

Quarter	Migration	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	BC	TERR	TOTAL
<u>1989</u>												
I	To Alta.	280	20	410	170	620	2970	1190	2830	4310	490	13290
	From Alta.	170	50	300	370	370	3210	820	1480	6800	420	13970
	Net Exchange	110	-30	110	-200	250	-240	370	1350	-2490	70	-680
II	To Alta.	230	50	320	190	430	3210	1220	2750	4400	510	13310
	From Alta.	140	60	360	200	330	3330	840	1710	6790	410	14180
	Net Exchange	90	-10	-40	-10	100	-120	380	1040	-2390	100	-870
III	To Alta.	400	110	740	560	1030	5960	2170	4850	5850	530	22190
	From Alta.	370	130	670	380	550	5080	1100	1770	9000	510	19540
	Net Exchange	30	-20	70	180	480	880	1070	3080	-3150	20	2650
IV	To Alta.	330	20	550	260	880	5620	1690	4520	6210	690	20760
	From Alta.	290	140	670	450	600	4720	1250	2190	10930	610	21850
	Net Exchange	40	-120	-120	-190	280	900	440	2330	-4720	80	-1090
TOTAL	To Alta.	1240	200	2020	1180	2960	17760	6270	14950	20770	2220	69550
	From Alta.	970	380	2000	1400	1850	16340	4010	7150	33520	1950	69540
	Net Exchange	270	-180	20	-220	1110	1420	2260	7800	-12750	270	10

See notes at end of table.

TABLE 3 (CONCLUDED)

POPULATION EXCHANGE WITH OTHER PROVINCES

ALBERTA, 1989 to 1990

Quarter	Migration	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	BC	TERR	TOTAL
1990												
I												
	To Alberta	280	40	260	310	360	3,190	970	3,230	4,190	310	13,140
	From Alberta	150	10	230	140	440	2,260	550	1,560	6,330	360	12,030
	Net Exchange	130	30	30	170	-80	930	420	1,670	-2,140	-50	1,110
IIp												
	To Alberta	170	90	350	220	310	3,550	1,330	3,300	4,560	420	14,310
	From Alberta	70	50	400	250	370	3,070	830	1,900	5,920	360	13,230
	Net Exchange	100	40	-50	-30	-60	480	500	1,400	-1,360	60	1,080

Notes: Data may not add to totals due to rounding.

p: Preliminary

TABLE 4
NATURAL INCREASE BY COMPONENT
ALBERTA, 1986 to 1990

Quarter	Births	Deaths	Natural Increase
<u>1986</u>			
I	10,660	3,490	7,170
II	11,790	3,410	8,380
III	11,140	3,260	7,880
IV	10,260	3,450	6,810
TOTAL	43,850	13,610	30,240
<u>1987</u>			
I	10,380	3,280	7,100
II	11,190	3,350	7,840
III	10,620	3,280	7,340
IV	9,920	3,400	6,520
TOTAL	42,110	13,320	28,790
<u>1988</u>			
I	10,140	3,670	6,470
II	10,750	3,380	7,370
III	10,950	3,300	7,650
IV	10,210	3,550	6,660
TOTAL	42,050	13,890	28,160
<u>1989</u>			
I	10,400	3,300	7,100
II	11,800	3,400	8,400
III	10,760	3,540	7,220
IV	10,820	3,670	7,150
TOTAL	43,780	13,910	29,870
<u>1990</u>			
I	10,710	3,600	7,110
Iip	11,280	3,320	7,960

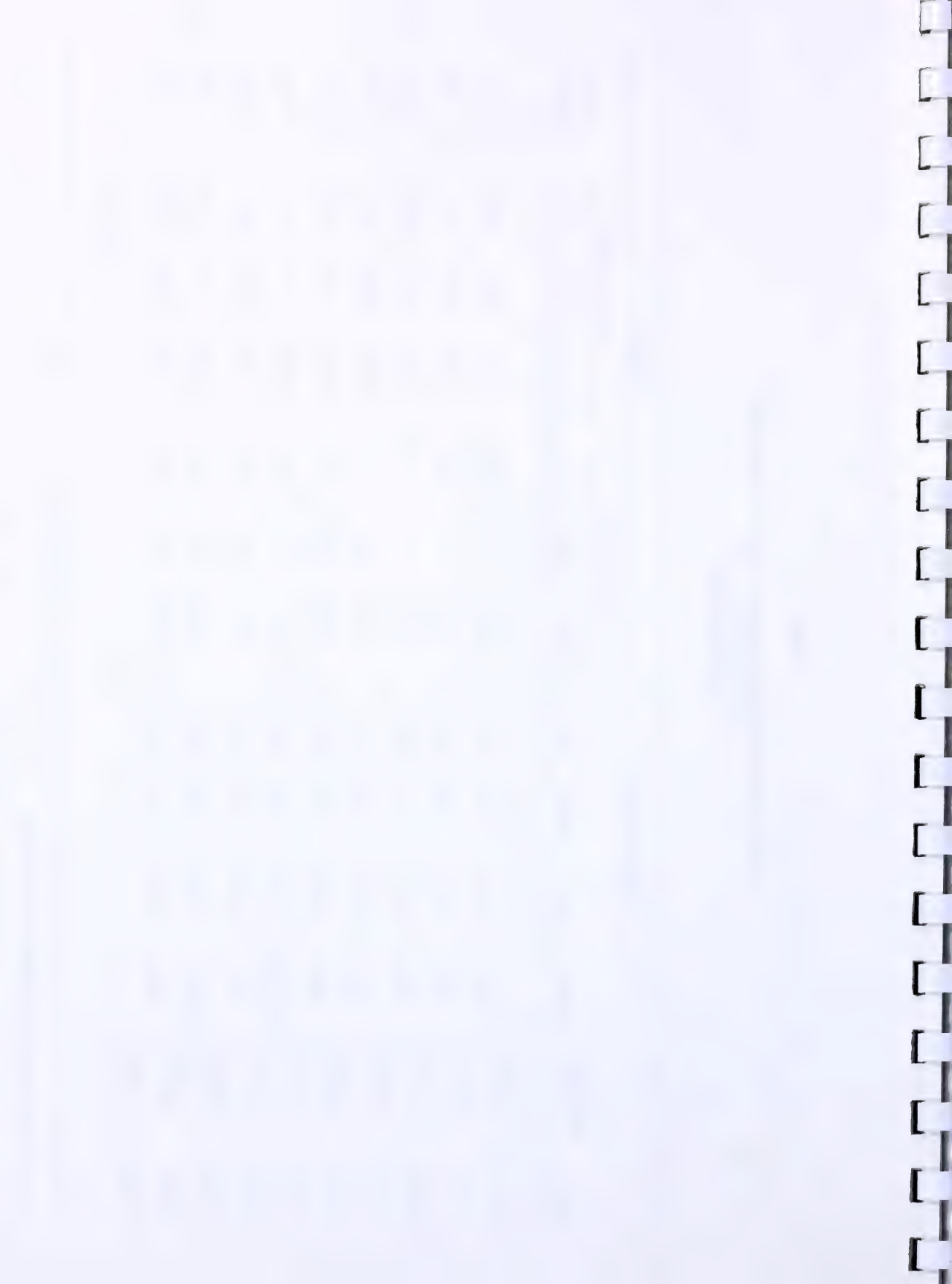
Note: Data may not add to totals due to rounding.
p: Preliminary

TABLE 5

POPULATION GROWTH BY CENSUS YEAR, BY COMPONENT
ALBERTA, 1981 to 1990
(IN THOUSANDS)

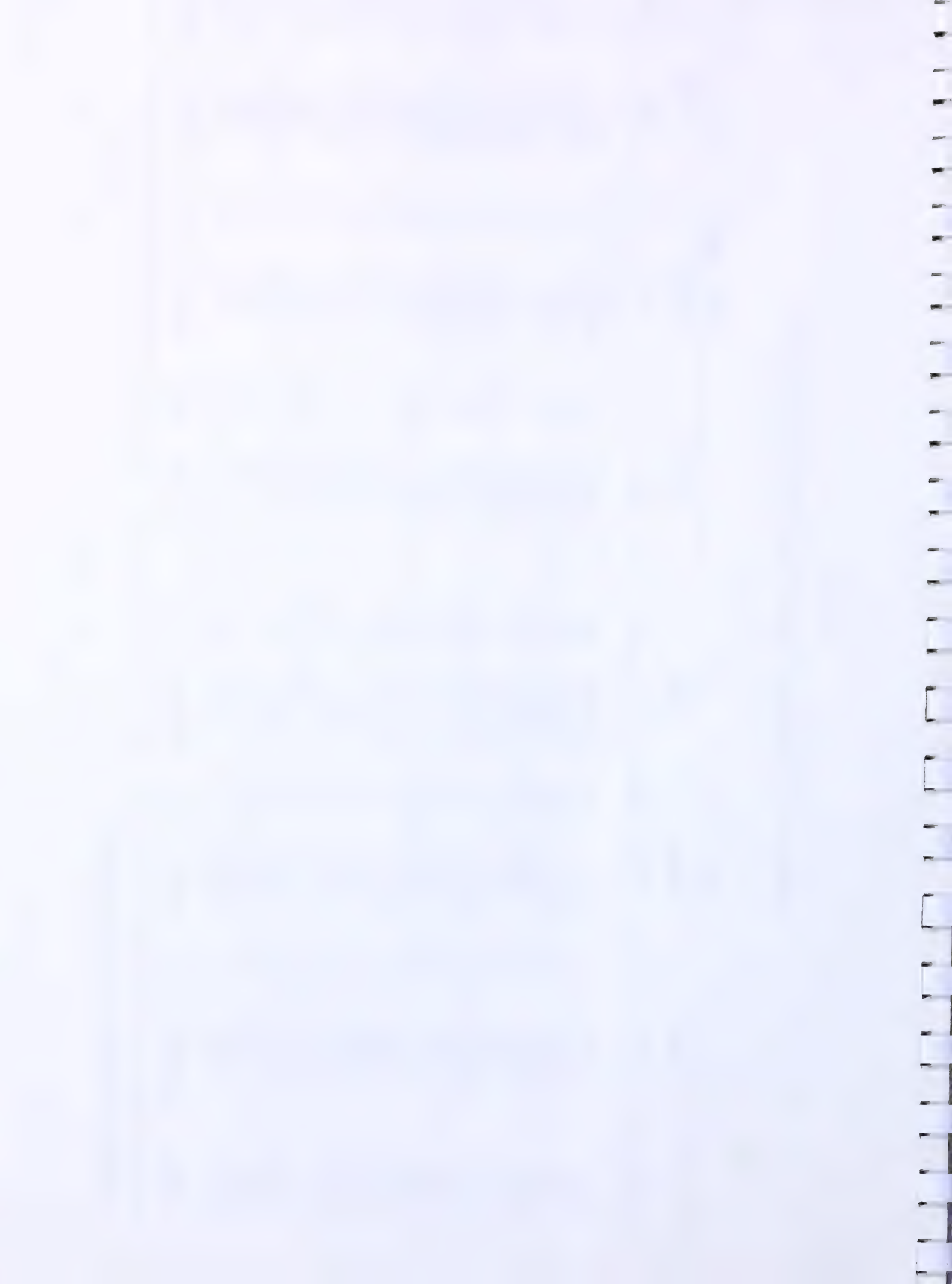
Year	Population (June 1)	Natural Increase				Migration						
		Growth	Births	Deaths	Net	International			Interprovincial			
						Immig.	Emig.	Net	In	Out	Net	
1981	2,237.3	77.2	44.0	13.2	30.8	20.6	7.3	13.2	98.0	64.8	33.3	46.5
1982	2,314.5	24.1	45.6	13.0	32.7	14.5	7.9	6.6	57.9	72.9	-15.1	-8.5
1983	2,338.7	-0.2	45.1	12.7	32.4	10.6	7.8	2.8	39.9	75.3	-35.4	-32.6
1984	2,338.5	10.1	44.2	13.0	31.2	9.5	5.4	4.1	64.5	89.8	-25.2	-21.1
1985	2,348.5	26.6	44.3	13.6	30.7	10.2	6.6	3.6	74.2	81.8	-7.7	-4.1
1986	2,375.1	2.6	43.3	13.4	29.9	10.4	7.4	3.0	46.2	76.5	-30.3	-27.3
1987	2,377.7	10.9	41.6	13.8	27.8	12.6	6.3	6.3	47.5	70.7	-23.2	-16.9
1988	2,388.7	34.3	42.5	13.5	29.0	13.8	5.9	7.9	68.9	71.5	-2.6	5.3
1989	2,423.0	46.8	44.3	14.2	30.1	17.9	6.0	11.9	70.2	65.4	4.8	16.7
1990p	2,469.8											

Note: Data may not add to totals due to rounding.



POPULATION ESTIMATES BY FIVE-YEAR AGE GROUP AND SEX, ALBERTA

Note: Data may not add to totals due to rounding.



METHODOLOGY

METHODOLOGY

Introduction

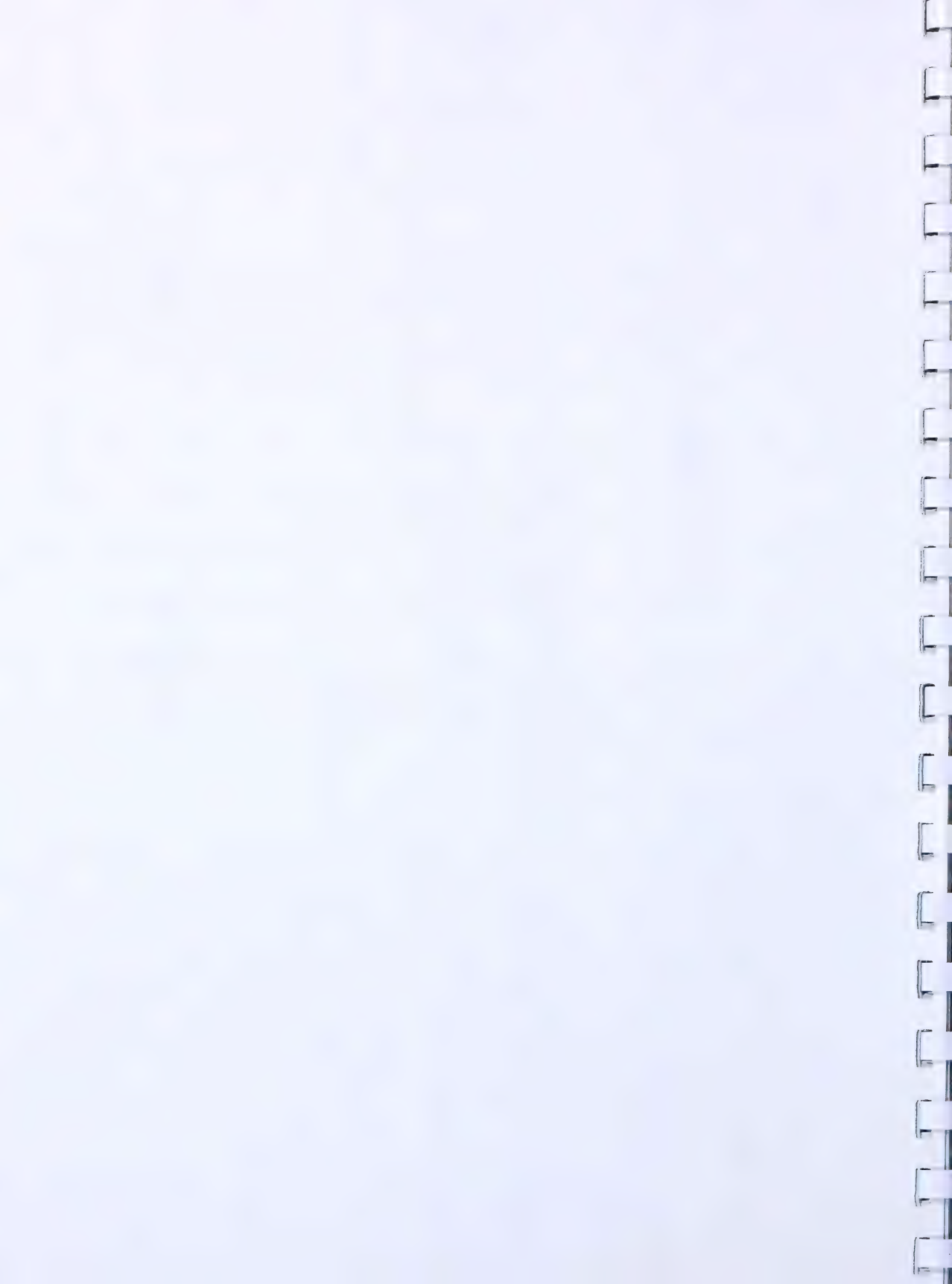
Alberta Bureau of Statistics, jointly with the Demography Division of Statistics Canada, prepared quarterly population estimates to provide up-to-date information on Alberta's population. These estimates are derived using information from administrative data files obtained from the following government agencies:

- 1) birth and death registrations from Vital Statistics Section, Alberta Health;
- 2) family allowance transfer counts from Income Security Branch, Health and Welfare Canada;
- 3) international migration statistics from Employment and Immigration Canada; and
- 4) health care registration data from Alberta Health.

The final estimates are produced using a component method. A description of the basic methodology and the procedures used in estimating each of the population growth components is presented in the following sections.

The Component Method

The component method of estimating quarterly population growth employs the population of a previous quarter as a base, and adds the natural increase plus net migration to derive the population estimates for the following quarter. Natural increase is obtained by subtracting deaths from births. Net migration is obtained by aggregating net interprovincial (in-migration minus out-migration) and net international migration (immigration minus emigration). Net migration and natural increase are then combined to derive an estimate of population growth.



Natural Increase

Natural increase is calculated as the difference between the number of births and the number of deaths that occurred during a specific quarter. Preliminary estimates on births and deaths are produced using birth and death rates. The average quarterly crude birth rate and the crude death rate of the preceding year are applied to the estimated provincial population at the beginning of the period to derive the estimated number of births and deaths. These estimates are then replaced by actual counts when data are available from the Vital Statistics Section, Alberta Health. These figures for births and deaths are 98% accurate. At the end of the year, the figures are further revised to include late registrations and out-of-province births and deaths.

Interprovincial Migration

Net interprovincial migration is derived as the balance of in-migration to and out-migration from the province.

To obtain preliminary estimates of interprovincial migration, family allowance transfer of accounts are used in conjunction with the latest adjustment factors and adult-child ratios. Since family allowance cheques are mailed to families monthly, there is incentive for these families to report any change in their address. The time lag in reporting such change is usually very small. Over the years family allowance transfer of accounts data have been an accurate source of the movements of children among the provinces.

The procedures used in estimating interprovincial migration for Alberta are further improved by incorporating additional information from tax records migration data. The adult-child ratios as well as adjustment factors for in and out-migration are used in the computation to derive an estimate of adult migration.



Immigration

The estimate of immigration is first produced on a preliminary basis and then revised when immigration statistics become available. Preliminary estimates are derived taking into consideration the expected number of immigrants to be admitted to Canada in a certain year as announced by Employment and Immigration Canada. Based on the historical immigration records, a ratio is derived to estimate Alberta's share of the total immigrants coming to Canada.

The final estimate of immigrants coming to Alberta is based on statistics compiled from immigration papers which each immigrant submits to the Canadian authority at the port of entry. The immigration papers contain information on the intended place of destination and the place of origin of the immigrant. Since this information is available monthly, the quarterly estimate of immigrants intending to come to Alberta can be calculated.

Emigration

Emigration estimates are derived using information from family allowance data and the number of emigrants to the United States. The family allowance files provide the number of child emigrants from Canada to all countries during the quarter. The USA quarterly tables contain the number of Canadian emigrants by age to the United States. The estimation of the total number of emigrants consists of three steps.

- a) The total number of Canadian emigrants to countries other than USA is estimated by using family allowance data minus the child emigrants to the USA together with an adjustment factor developed from immigration files. This factor, applied to the number of family allowance accounts transferred out of country during the quarter, will provide the number of adult emigrants to countries other than the USA.



- b) The exact number of emigrants to the USA is then added to estimates derived in (a).
- c) The distribution of emigrants by province of origin (Alberta) is derived using the family allowance data.

GLOSSARY

Birth Rate, or Crude Birth Rate - the number of births in a year divided by the total population.

Child Dependency Ratio - the ratio of children under 15 to working-age persons between the ages of 15 to 64.

Death Rate, or crude Death Rate - the number of deaths in a year divided by the total population.

Emigration - the migration of population out of a country to another country.

Fertility - the contribution of births to population change.

Immigration - the migration of population into a country from another country.

In-migration - the migration of population into a geographical area.

Median Age - the age at which the population is divided into equal halves, such that one half of the population is older than the median age and the other half of the population is younger than the median age.

Migration - a permanent change of residence from one geographical area to another.

Natural Increase - the net contribution of births less deaths to population change.

Net Migration - the difference between in-migration and out-migration for a geographical area.

Old Age Dependency Ratio - The ratio of persons aged 65 years and over to working-age persons between the ages of 15 and 64.

Out-migration - the migration of population out of a geographical area.

Sex Ratio - the proportion of males to females in a population.

GLOSSARY

- Birth rate, or crude birth rate - the number of births in a year divided by the total population.
- Child dependency ratio - the ratio of children under 15 to working-age persons between the ages of 15 and 64.
- Death rate, or crude death rate - the number of deaths in a year divided by the total population.
- Emigration - the migration of population out of a country to another country.
- Fertility - the contribution of women to population change.
- Immigration - the migration of population into a geographical area.
- Median age - the age at which the population is divided into equal halves; each half of the population is older than the median age and the other half of the population is younger than the median age.
- Migration - a permanent change of residence from one geographical area to another.
- Natural increase - the net contribution of birth and death to population change.
- Sex ratio - the difference between in-migration and out-migration for a geographical area.
- Old Age Dependency Ratio - the ratio of persons aged 65 years and over to working-age persons between the ages of 15 and 64.
- Out-migration - the migration of population out of a geographical area.
- Sex ratio - the proportion of males to females in a population.

